

The Examiner then concluded in part that the inventions as claimed do not encompass overlapping subject matter.

The Examiner's conclusion is not supported by substantial evidence. In fact, the Examiner's assertion that the claimed subject matter of Groups I and II do not overlap is contrary to the written description of the present application. The Examiner's attention is directed to Paragraph 0093 of the published application wherein the term "Particle" is defined as follows.

*'Particle' as used herein has the following meaning--a particle with dimensions in the range 0.5 nm to 100 microns, which includes atomic clusters formed by inert gas aggregation or otherwise. Atomic clusters could include a wide range of clusters such as but not limited to metallic, semiconducting, and insulating clusters. (Emphasis added)*

The Examiner is also directed to Paragraph 0098 of the published application wherein the term "Atomic Cluster" or "Cluster" is defined as follows.

*'Atomic Cluster' or 'Cluster' as used herein has the following meaning--a nanoscale aggregate of atoms formed by any gas aggregation or one of a number of other techniques [7] with diameter in the range 0.5 nm to 1000 nm, and typically comprising between 2 and  $10^7$  atoms.*

The only point of distinction asserted by the Examiner between the process set forth in the Group I claims and the process set forth in the Group II claims is that the process of the Group I claims uses particles and the process of the Group II claims uses clusters. In view of the Applicants' definitions of the terms "particle" and "cluster", it should now be clear that a cluster as described and claimed in the present application is a subset of a particle. Therefore, Claim 1 and Claim 41

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overlap in scope. Accordingly, condition (2) of the three criteria of MPEP §806.05(j) is not met.

For all of the foregoing reasons, it is believed that the restriction requirement as set forth in the Official Action is improper and should be withdrawn. The Applicants hereby request reconsideration of the requirement. In the event that the Examiner decides to maintain the restriction requirement, then it is respectfully requested that he provide a proper explanation and/or substantial evidence to support the requirement in accordance with MPEP §806.05(j).

Respectfully submitted,  
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